

Hisense[®]

LCD Television Service Manual

Product Type: LHD32D33EU

Chassis: SIS231

Hisense Electric Co.,Ltd

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Service Manual

1. Precautions and notices

BEFORE SERVICING THE LCD TV, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

USE ONLY MANUFACTURER SPECIFIED REPLACEMENT PARTS WHEN SERVICING.

USE OF NON-AUTHORIZED PARTS WILL VOID THE MANUFACTURE'S WARRANTY


Proper service and repair is important to the safe, reliable operation of all Hisense Equipment. The service procedures recommended by Hisense and described in this Service Guide are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility is that improper service methods may damage the equipment and pose risk of personal injury

. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Service should only be performed by an experienced electronics technician trained in the proper Television safety and service methods and procedures Hereafter throughout this manual, Hisense will be referred to.

1.1 Warning

1.1.1

Critical components having special safety characteristics are identified with a  by the Ref. No. in the parts list. Use of non-manufacturer's recommended parts may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from Hisense assumes no liability, express or implied, arising out of any unauthorized modification of design. Service tech assumes all liability.

***DANGER CAUTION**

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE GUIDE.

1.1.2.

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, be sure to use antistatic table mats and properly use a grounding wrist strap. Keep components and tools also at this same potential.

IMPORTANT:

Always disconnect the power cord from AC outlet before replacing parts or modules.

1.1.3

To prevent electrical shock, use only a properly grounded 3 prong outlet or extension cord.

1.1.4

substitutions may result in fire, electric shock, or other hazards and will void the manufacturer's warranty.

1.1.5

Safety regulations require that after a repair the set must be returned in its original condition. In addition, prior to closing set, check that:

- > All wire harnesses and flex cables are properly routed and secured with factory tape and/or mounted cable clamps.
- > All cables and connectors are properly insulated and do not have any bare wires/lead exposed.

1.1.6

(1) Do not supply a voltage higher than that specified to this product. This may damage the product and may cause a fire.

(2) Do not use this product:

- > High humidity areas
- > In an area where any water could enter or splash into the unit.

High humidity and water could damage the product and cause fire.

(3) If a foreign substance (such as water, metal, or liquid) gets inside the panel module, immediately turn off the power. Continuing to use the product may cause fire or electric shock.

(4) If the product emits smoke, and abnormal smell, or makes an abnormal sound, immediately turn off the power. Continuing to use the product, it may cause fire or electric shock.

(5) Do not pull out or insert the power cable from/to an outlet with wet hands. It may cause electric shock.

(6) Do not damage or modify the power cable. It may cause fire or electric shock.

(7) If the power cable is damaged, or if the connector is loose, do not use the product: otherwise, this can lead to fire or electric shock.

(8) If the power connector or the connector of the power cable becomes dirty or dusty, wipe it with a dry cloth. Otherwise, this can lead to fire.

(9) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

1.2 Notes

Notes on Safe Handling of the LCD panel and during service

The work procedures shown with the Note indication are important for ensuring the safety of the product and the servicing work. Be sure to follow these instructions.

- Before starting the work, secure a sufficient working space.
- At all times other than when adjusting and checking the product, be sure to turn OFF the POWER Button and disconnect the power cable from the power source of the TV during servicing.
- To prevent electric shock and breakage of PC board, start the servicing work at least 30 seconds after the main power has been turned off. Especially when installing and removing the power board, start servicing at least 2 minutes after the main power has been turned off.
- While the main power is on, do not touch any parts or circuits other than the ones specified. If any connection other than the one specified is made between the measuring equipment and the high voltage power supply block, it can result in electric shock or may trip the main circuit breaker. When installing the LCD module in, and removing it from the packing carton, be sure to have at least two persons perform the work.
- When the surface of the panel comes into contact with the cushioning materials, be sure to confirm that there is no foreign matter on top of the cushioning materials before the surface of the panel comes into contact with the cushioning materials.

Failure to observe this precaution may result in, the surface of the panel being scratched by foreign matter.

- Be sure to handle the circuit board by holding the large parts as the heat sink or transformer. Failure to observe this precaution may result in the occurrence of an abnormality in the soldered areas.
- Do not stack the circuit boards. Failure to observe this precaution may result in problems resulting from scratches on the parts, the deformation of parts, and short-circuits due to residual electric charge.
- Perform a safety check when servicing is completed. Verify that the peripherals of the serviced points have not undergone any deterioration during servicing. Also verify that

the screws, parts and cables removed for servicing purposes have all been returned to their proper locations in accordance with the original setup.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of insinuated dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the set.

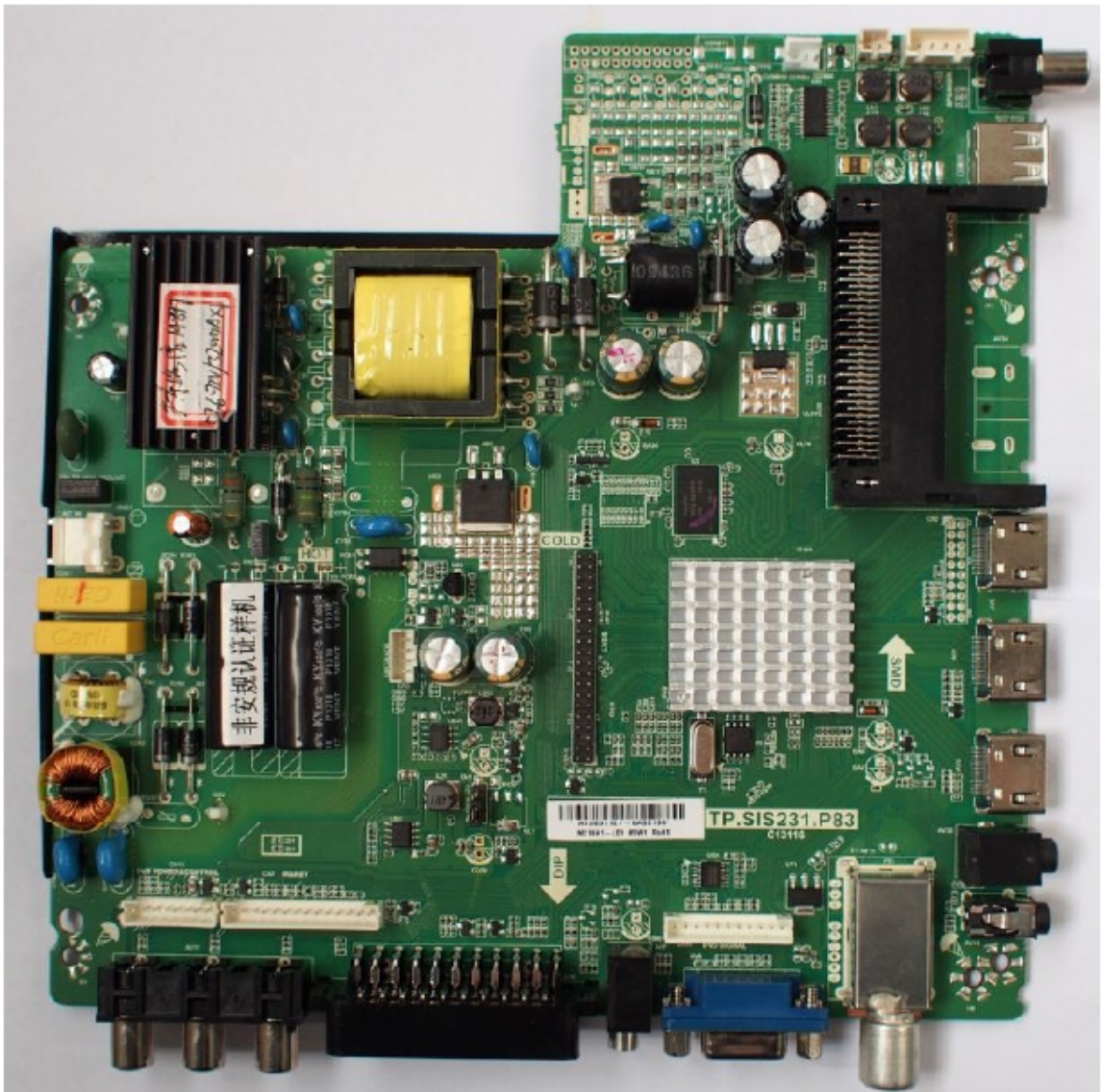
2. Product Specifications:

2.1 Specification:

Model		LHD32D33EU
Dimension	With Stand	Width: 737 mm Height: 500 mm Depth: 198 mm
	Without Stand	Width: 737 mm Height: 446 mm Depth: 60 mm
Weight	NET	7.9 kg
	GROSS	10.2 kg
LCD Panel Minimum size (diagonal)		32 inches
Screen resolution		1366 × 768
Audio power		6W+6W
Power consumption		50 W
Power supply		100-240 V~50 / 60 Hz
USB supply		DC 5 V, Max 500 mA
Television System		PAL I B/G D/K, SECAM B/G D/K L/L' DVB-T, DVB-C
Environmental conditions		Temperature: 5°C-45°C Humidity: 20%-80% RH Atmospheric pressure: 86 kPa-106 kPa

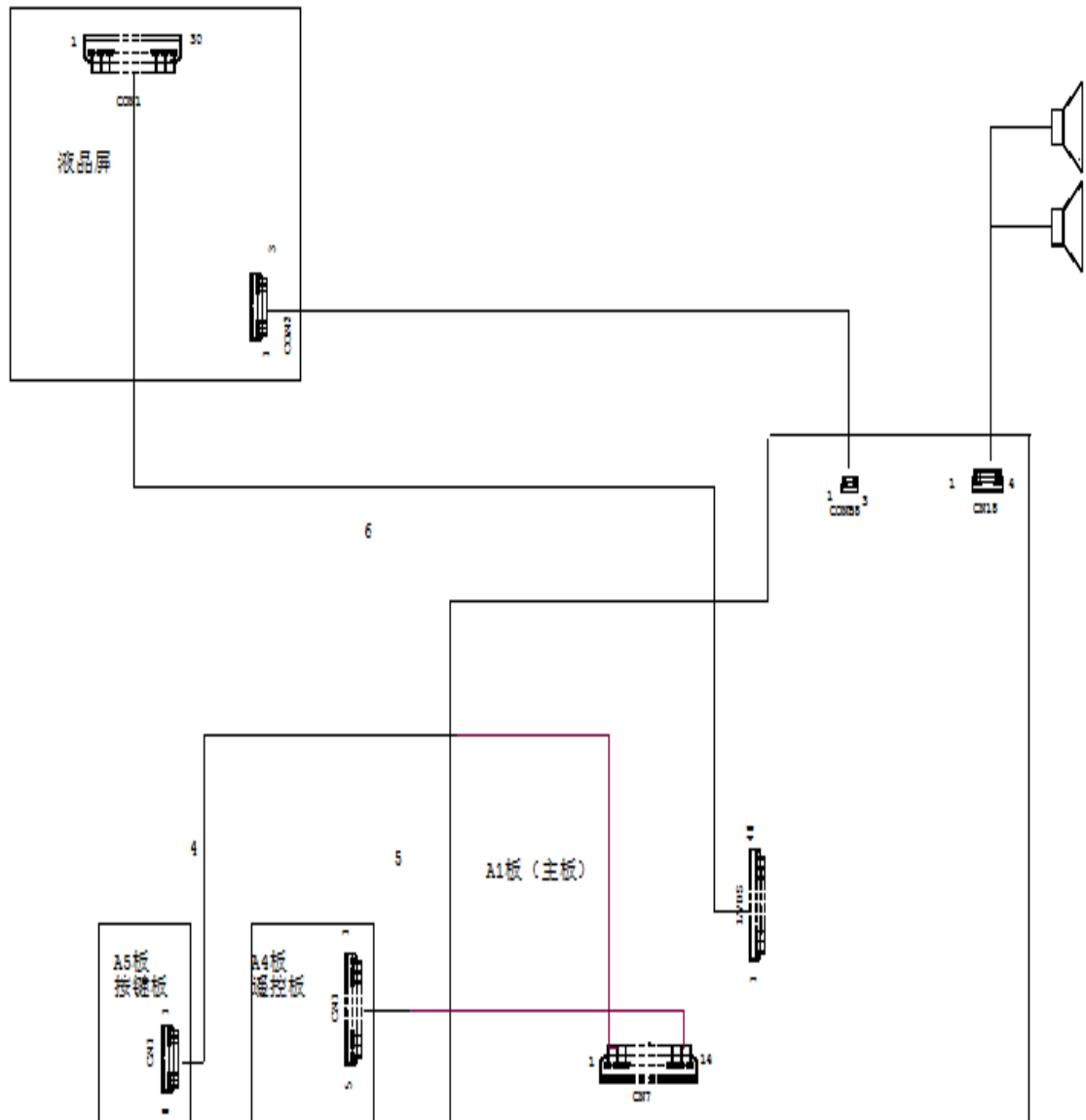
Notes: Features, appearance and specifications are subject to change without notice.

2.2 Main Board:



The “main board & power board image” is only for reference, other SIS231 products refer to the actual units to determine the boards, please.

2.3 Wiring Diagram:



Note:

The above Wiring Diagram is only for reference, other SIS231 products refer to the actual units to determine the connectors, please.

3. Factory/Service OSD Menu and Adjustment

3.1 To enter the Factory OSD Menu

a. With factory RC (remote control)

1. Press “M” button and enter factory mode.
2. Press “Menu” button and enter factory OSD menu.
- 3 . Press “CH+”/“CH-” button select the function menu, press “VOL+”/“VOL-” enter the selected function menu. Press “VOL+”/“VOL-” button adjust values in the menu.
4. Press “M” button exit factory mode in the factory OSD menu.

When TV outgoing factory,user can not enter factory OSD menu with Factory Remote

b. With user’s RC

1. Power TV On
2. Press Menu button and call up User OSD Menu
3. Select Sound-> Balance
4. When Balance value is “0”, Enter 1->9->6 ->9 in sequence.

Note: If necessary, re-do number keys.

5. Factory OSD appears.
6. Press the standby button then AC turn off and restart the TV, which can exit factory OSD menu.

3.2 Factory OSD Menu

4. Software Upgrading

4.1 Get ready for upgrading

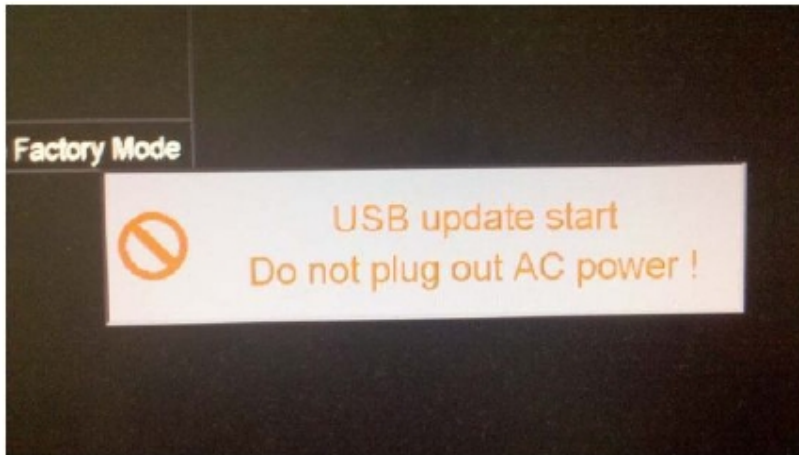
Unzip the compressed software program, you'll get a BIN file named SISEU23X8M.bin

Copy this BIN file to the root directory of your USB flash disk.

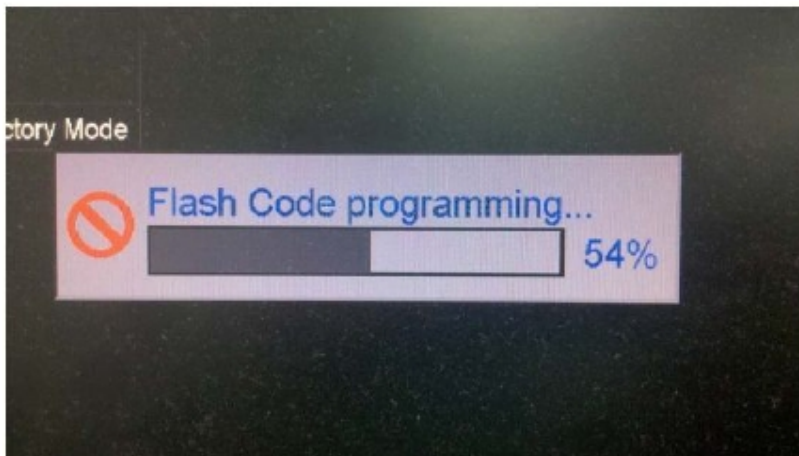
4.2 Using factory menu to upgrade

4.2.1 Copy the BIN file to the USB root directory, insert the USB disk to the side of the USB interface of the main board.

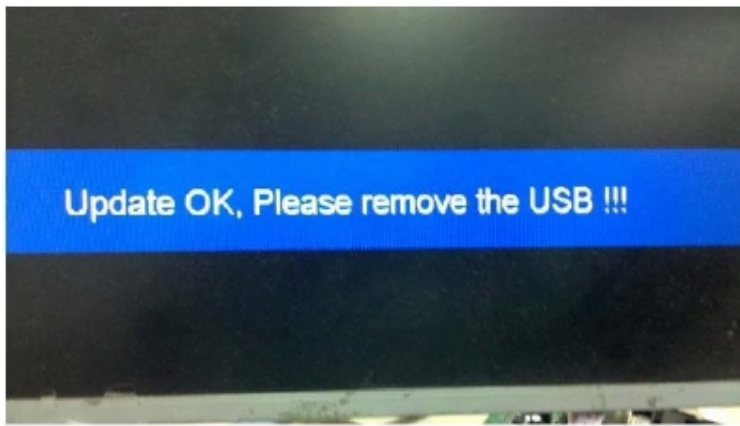
4.2.2 Enter the factory menu (balance+1969), select "Update -> USB Update -> USB Update Start". The LED indicator will flash red and blue when upgrading.



The system begins to upgrade when the upgrade file automatically loaded, and displays a progress bar in the OSD, with LED lights flash.



4.2.3 After update success, it will have the following tips. Please AC off and AC on.



4.2.4 Confirm the software Version in the Version Menu. If the update is successful, enter the Factory Menu and select "Init TV"

4.3 Upgrade when power up

4.3.1 Make sure the TV is AC off.

4.3.2 Copy the BIN file to the USB root directory, insert the USB disk to the side of the USB interface of the main board.

4.3.3 AC on, the LED indicator will start flash red and blue till the upgrade is finished. The red light and green light flashing at 1/4 seconds intervals. Please AC off and AC on.

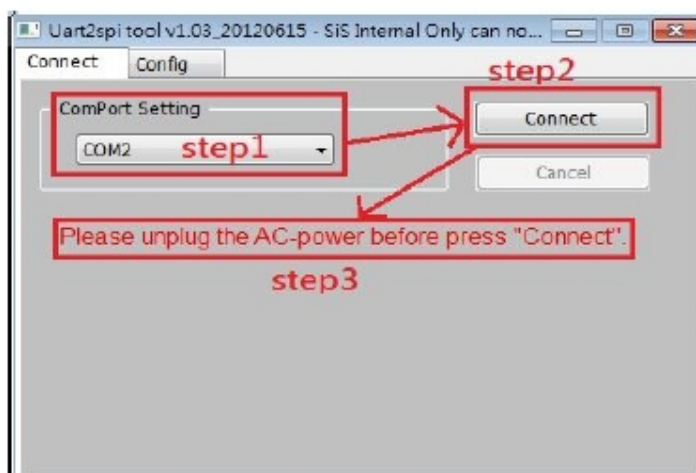
4.4 Using uart2spi_tool to upgrade

Serial port can upgrade the whole program. Serial port upgrade is very slow, it takes about 20 minutes. As far as possible without serial upgrade. The serial upgrade tools is uart2spi_tool. Serial port upgrade steps:

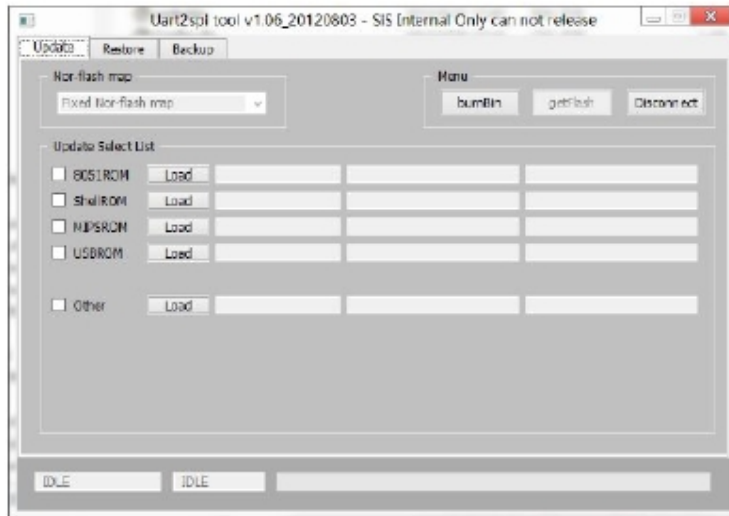
4.4.1. Open the serial port upgrade kits uart2spi_tool, choosing the right serial number.

4.4.2. Click "connect".

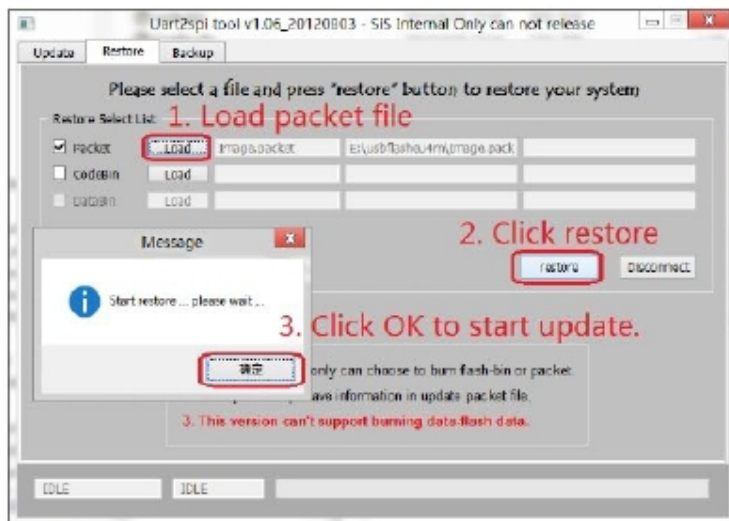
4.4.3. AC on.



After AC on, it will become the following interface:



4.4.4 Choose to "Restore" page:



4.4.5 Load the update file, use the packet file.

4.4.6 Click the "restore".

4.4.7 Click "ok", and began to upgrade. At the same time, the progress bar at the bottom of began to move. Progress bar run twice, the first time is erased, and the second time is written.

4.4.8 To be written to complete, will pop-up prompts, can again on the electricity turned on.

5. Power assign & Signal process

5.1 SIS231 Power assign

5.2 SIS231 Signal process

5.3. Troubleshooting

6. Schematic circuit diagram

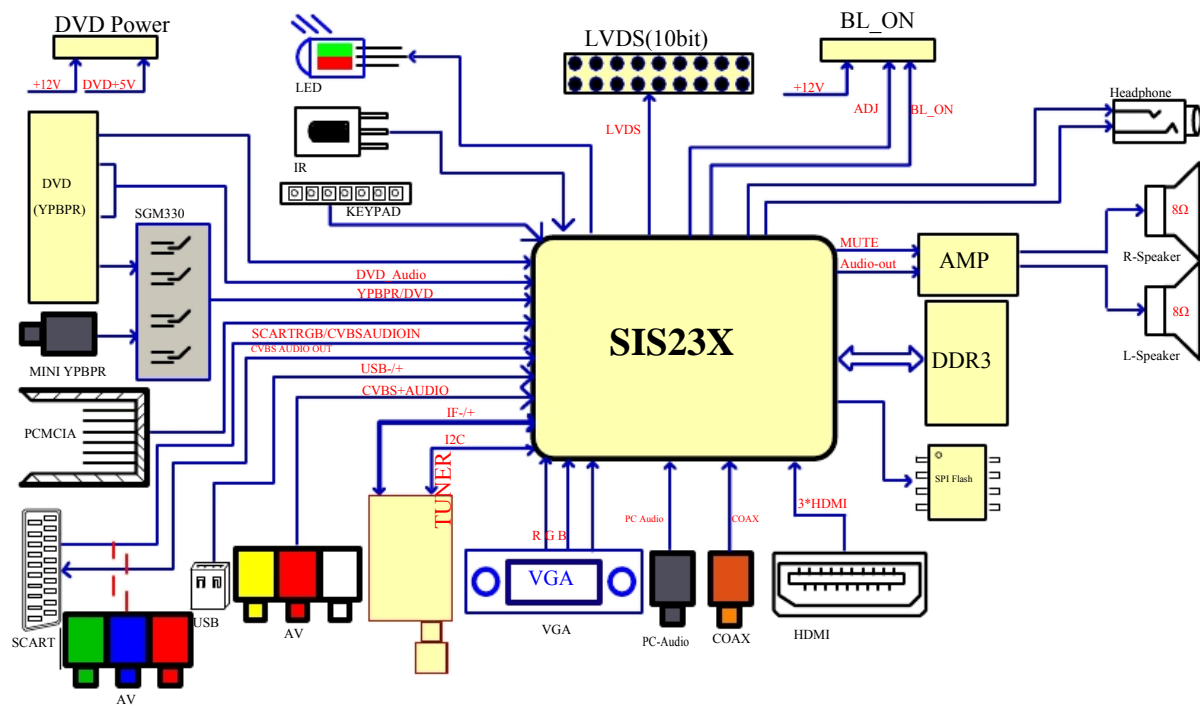
7. Explode view

TP.SIS231.P83X

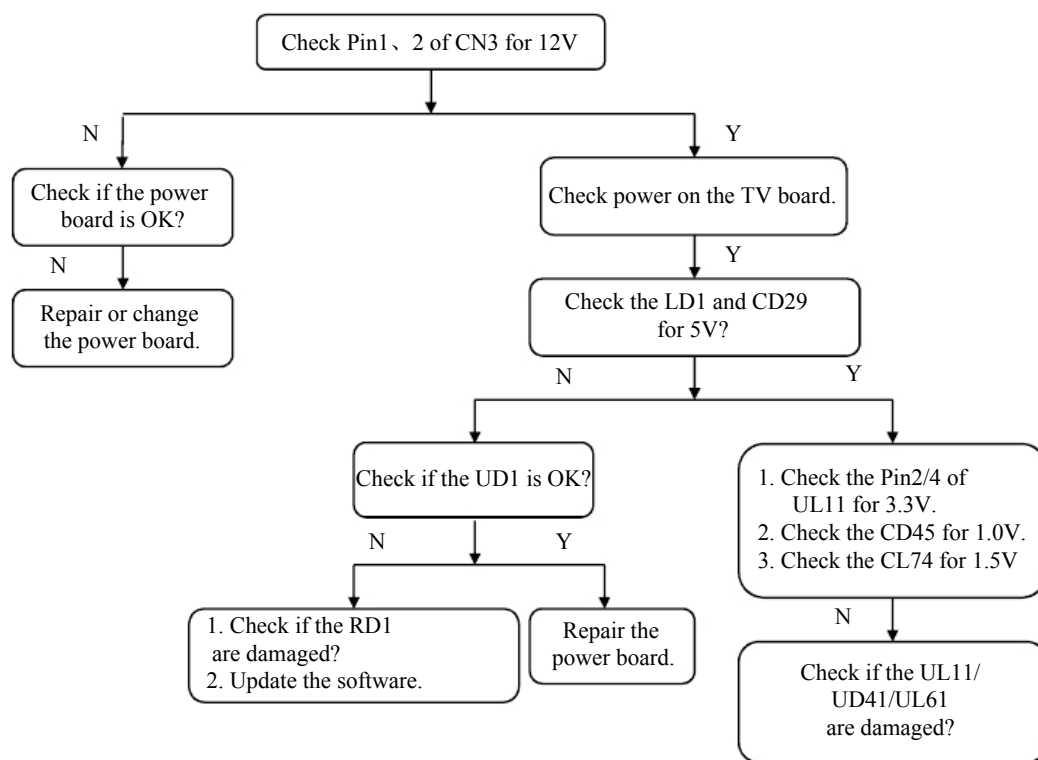
Maintenance Manual

- © **Power troubleshooting**
- © **Display troubleshooting**
- © **Audio troubleshooting**
- © **Function troubleshooting**
- © **Power board troubleshooting**

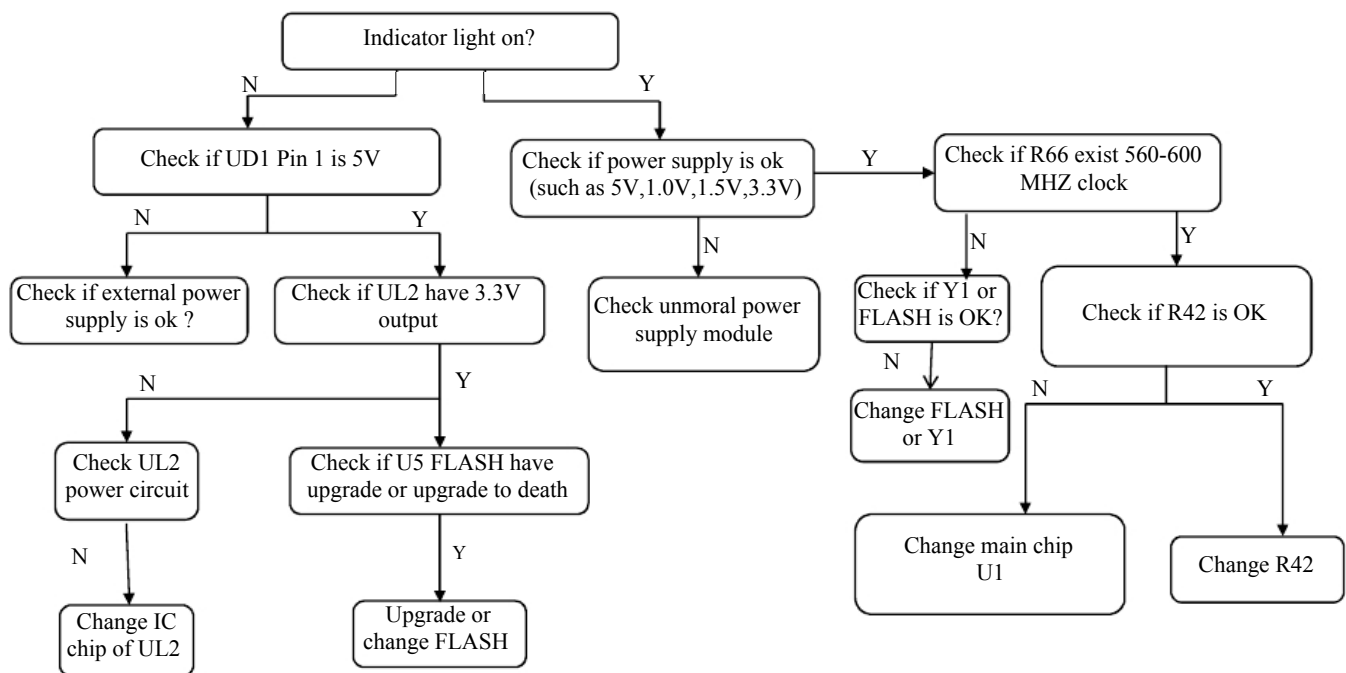
5.3.1. Block Diagram Of Mainboard Circuit



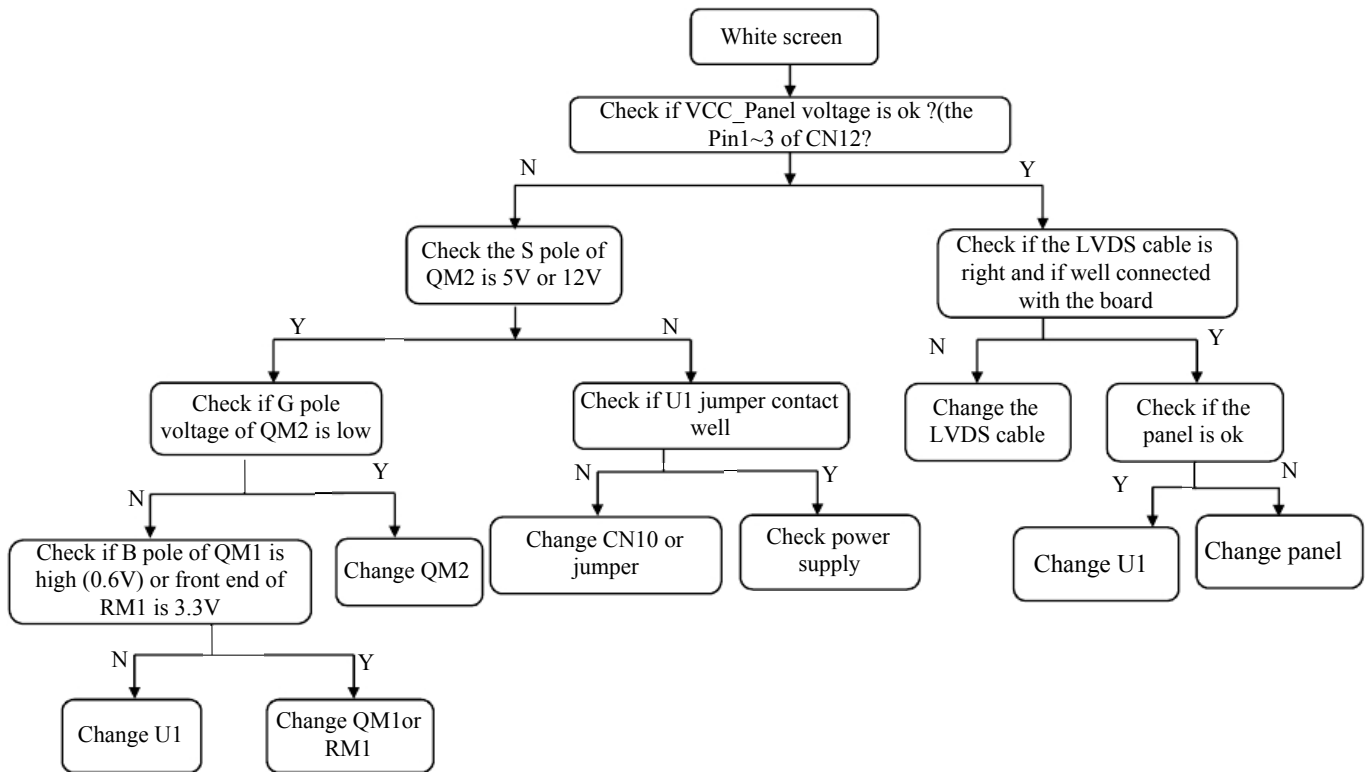
5.3.2. Power Troubleshooting



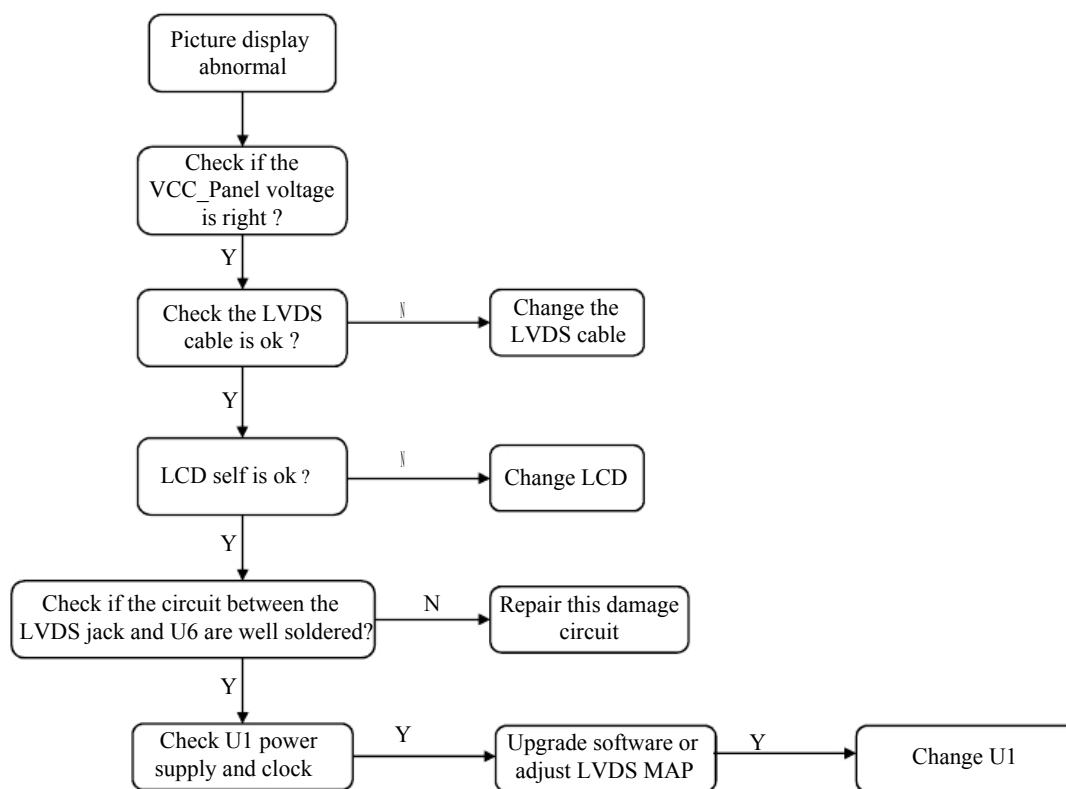
5.3.3. Display Troubleshooting (blank screen or show nothing)



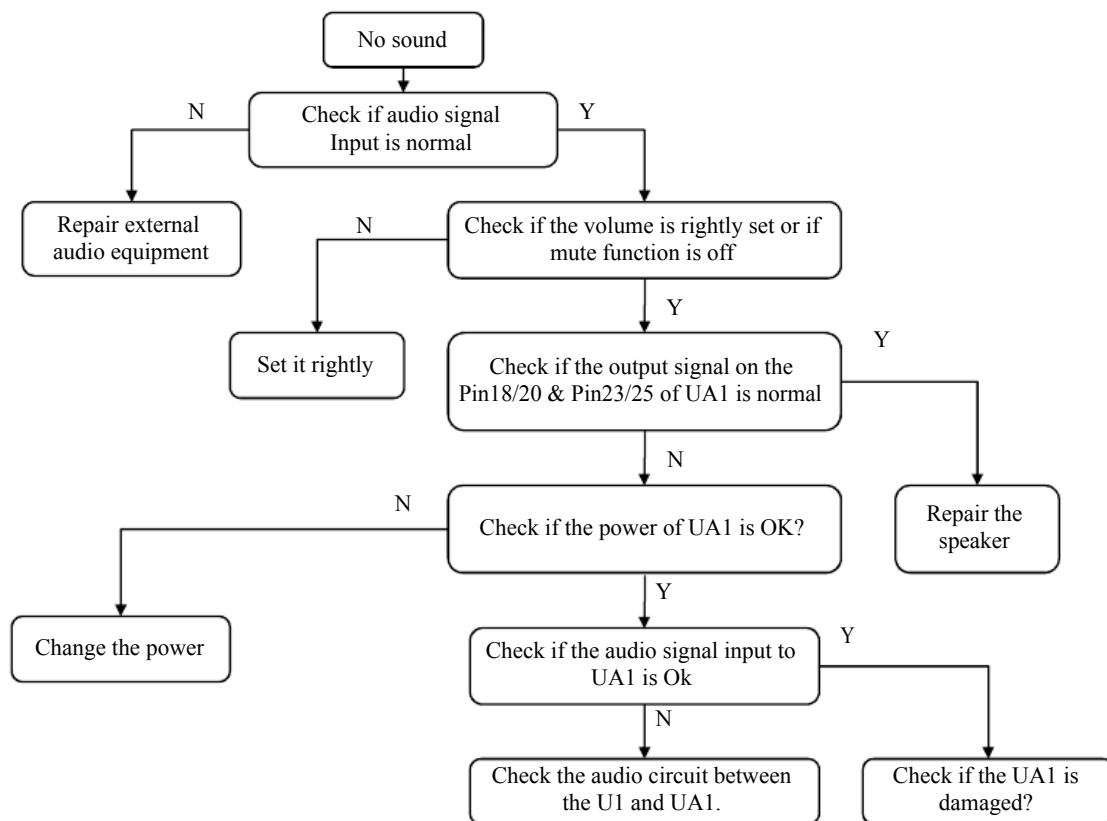
5.3.4. Display Troubleshooting (white screen)



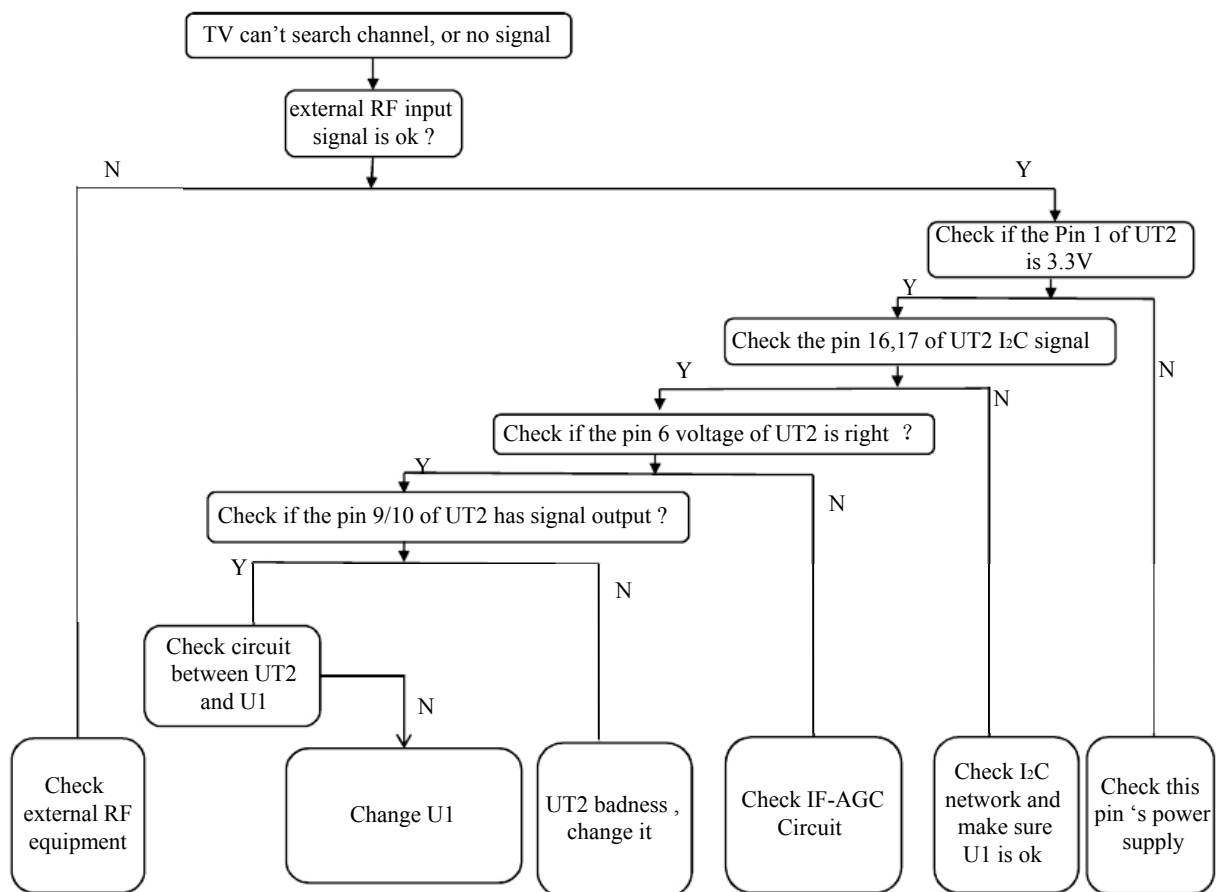
5.3.5. Display Troubleshooting (picture badness)



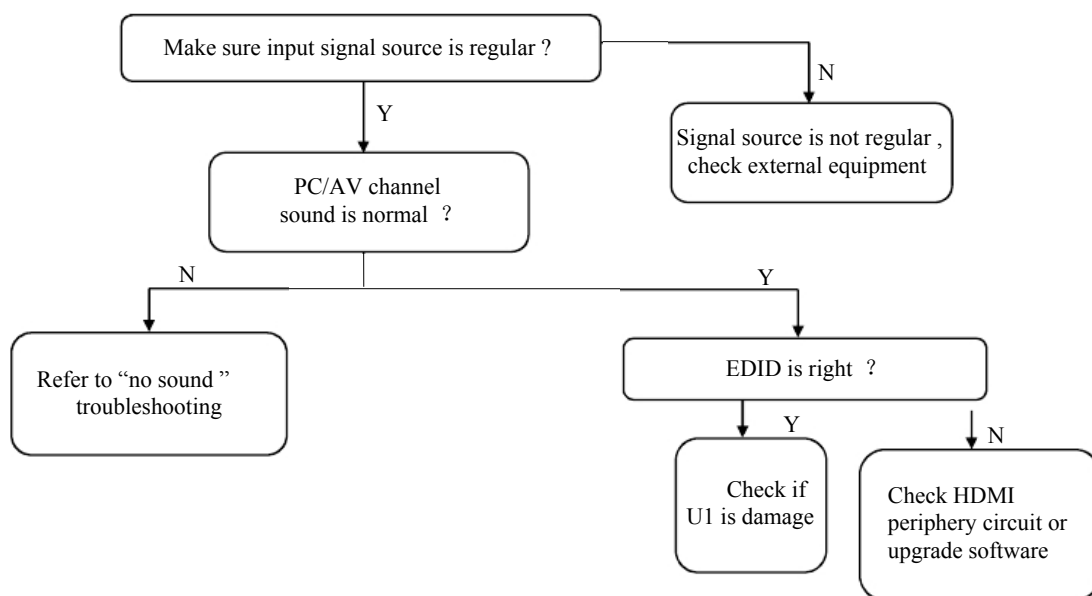
5.3.6. Audio Troubleshooting (no sound)



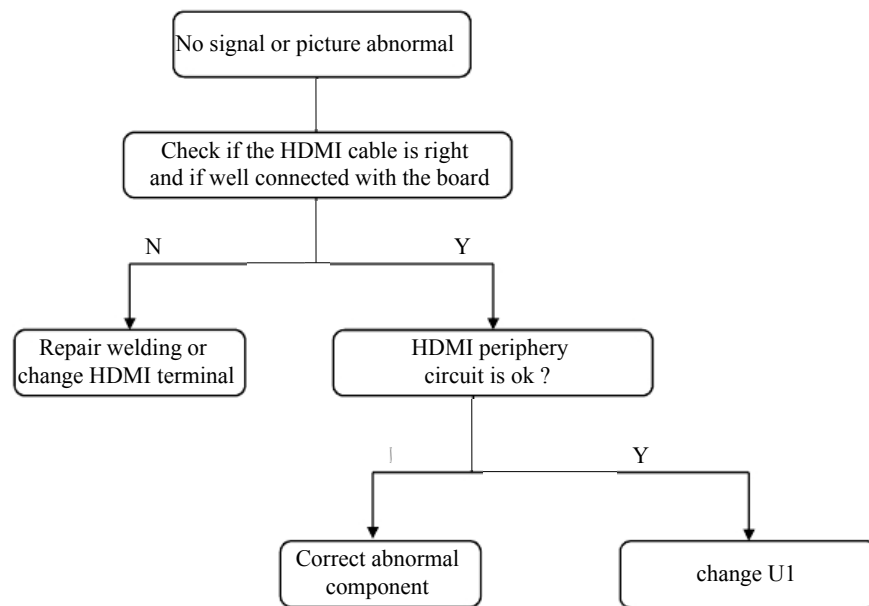
5.3.7. Function Troubleshooting (TV fault)



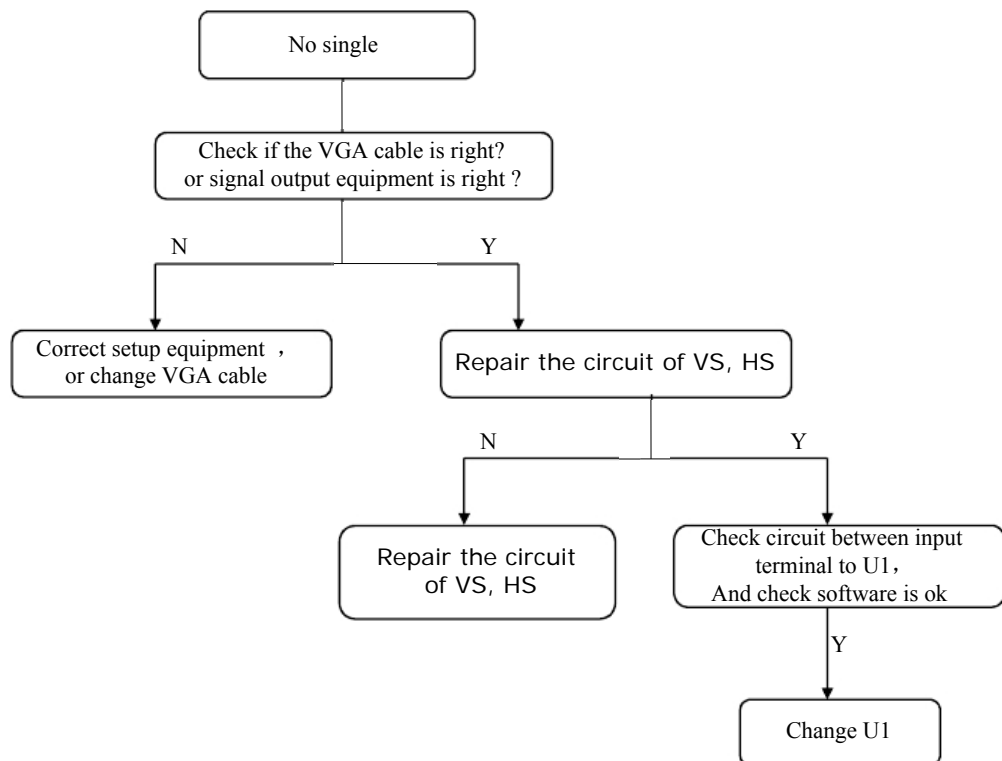
5.3.8. Function Troubleshooting (HDMI no sound)



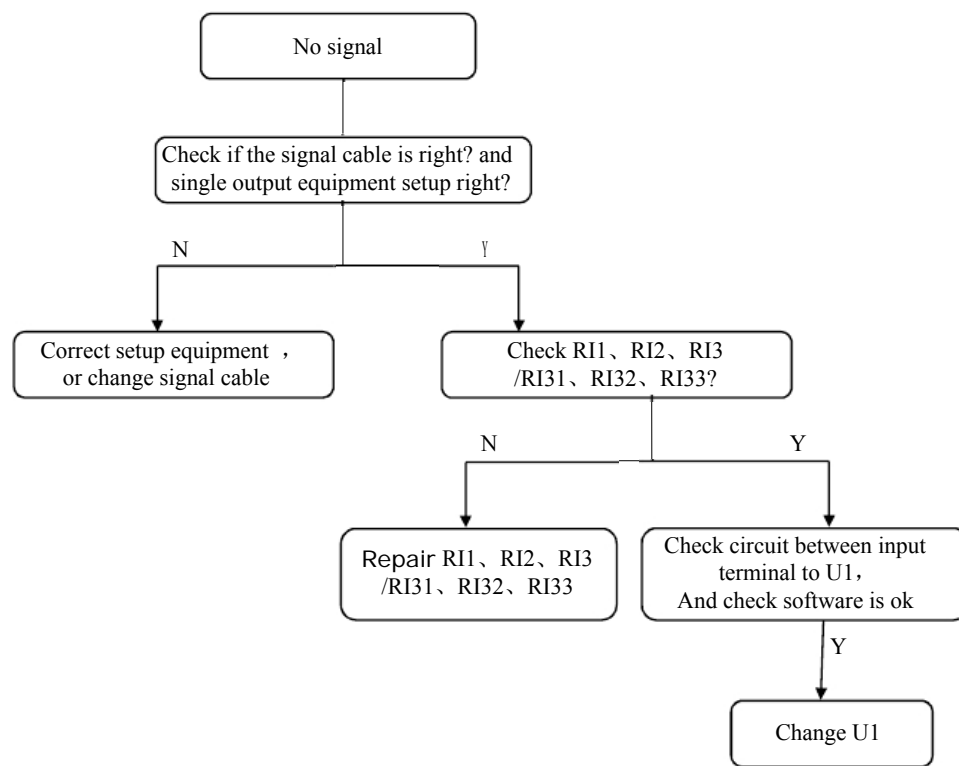
5.3.9. Function Troubleshooting (HDMI no picture)



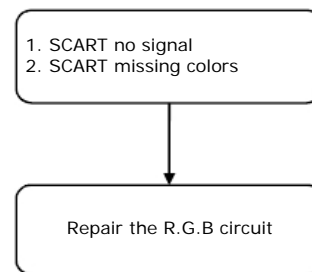
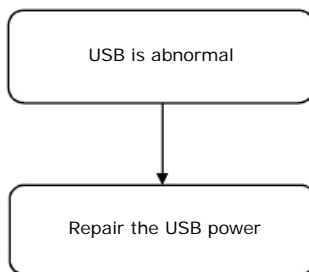
5.3.10. Function Troubleshooting (VGA no single)



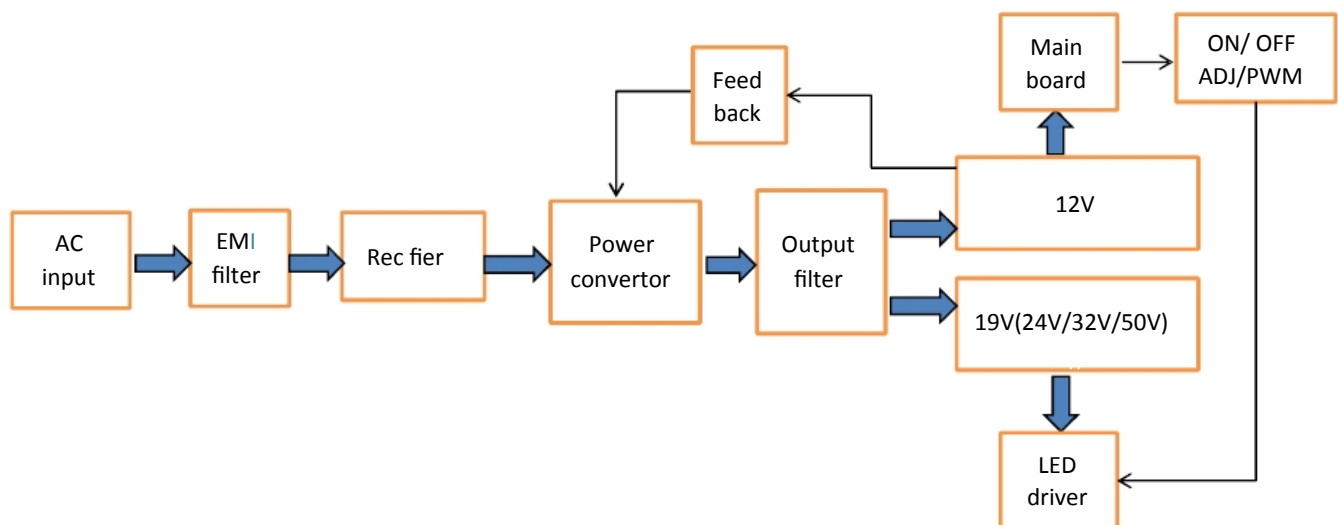
5.3.11. Function Troubleshooting (YPBPR or CVBS no signal)



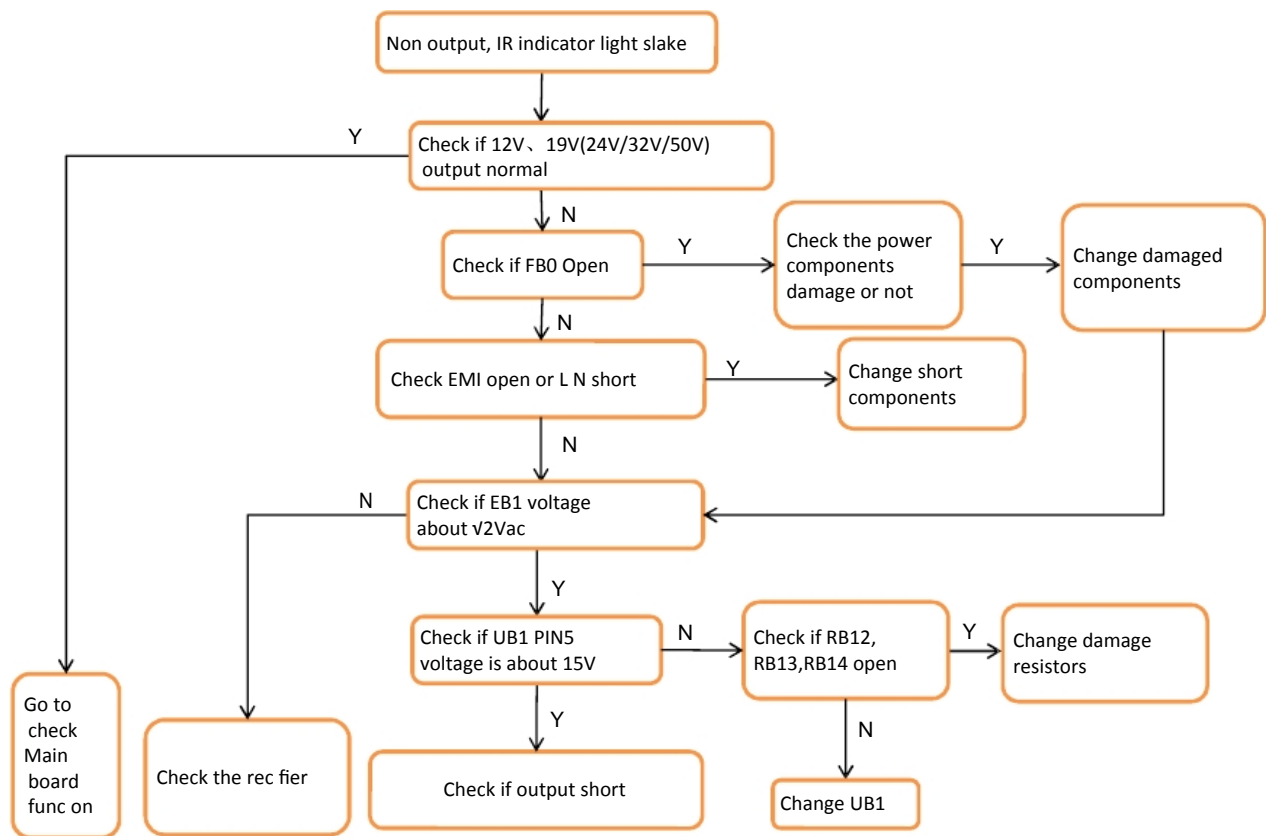
5.3.12. Function Troubleshooting (other)

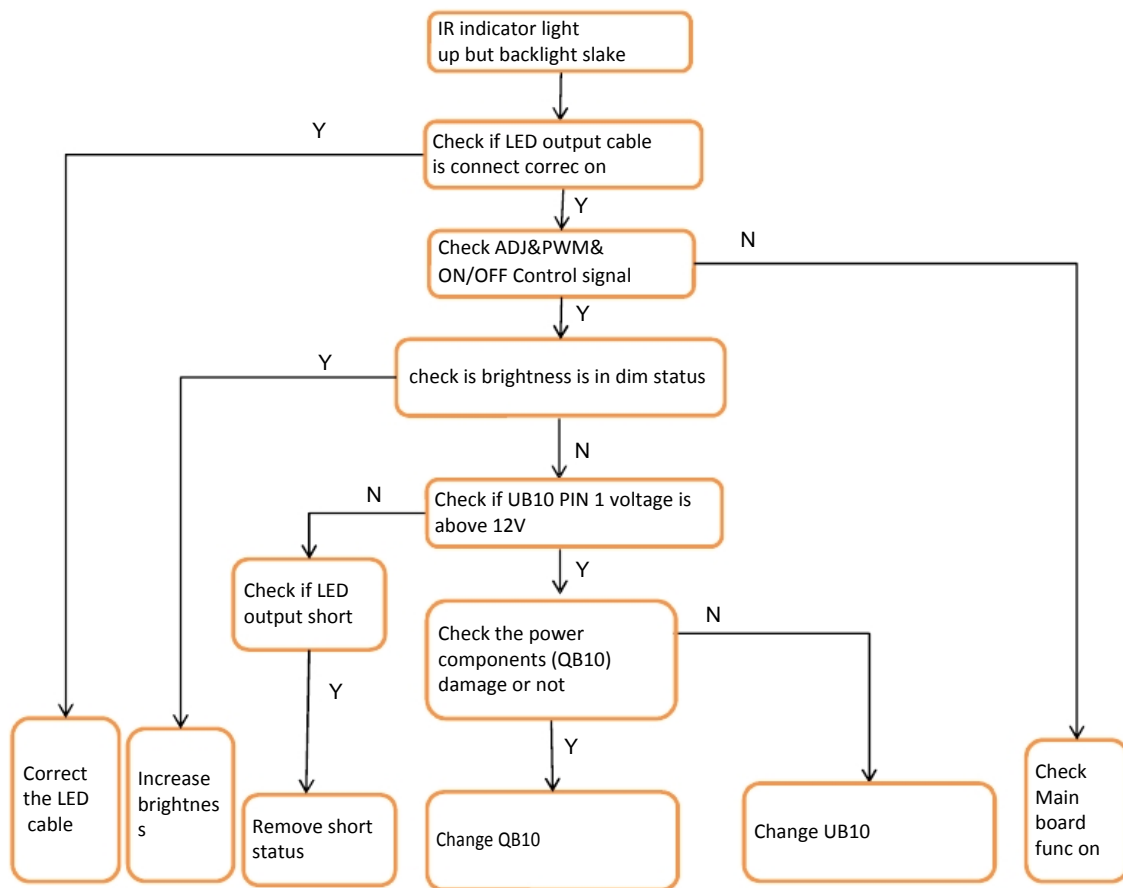


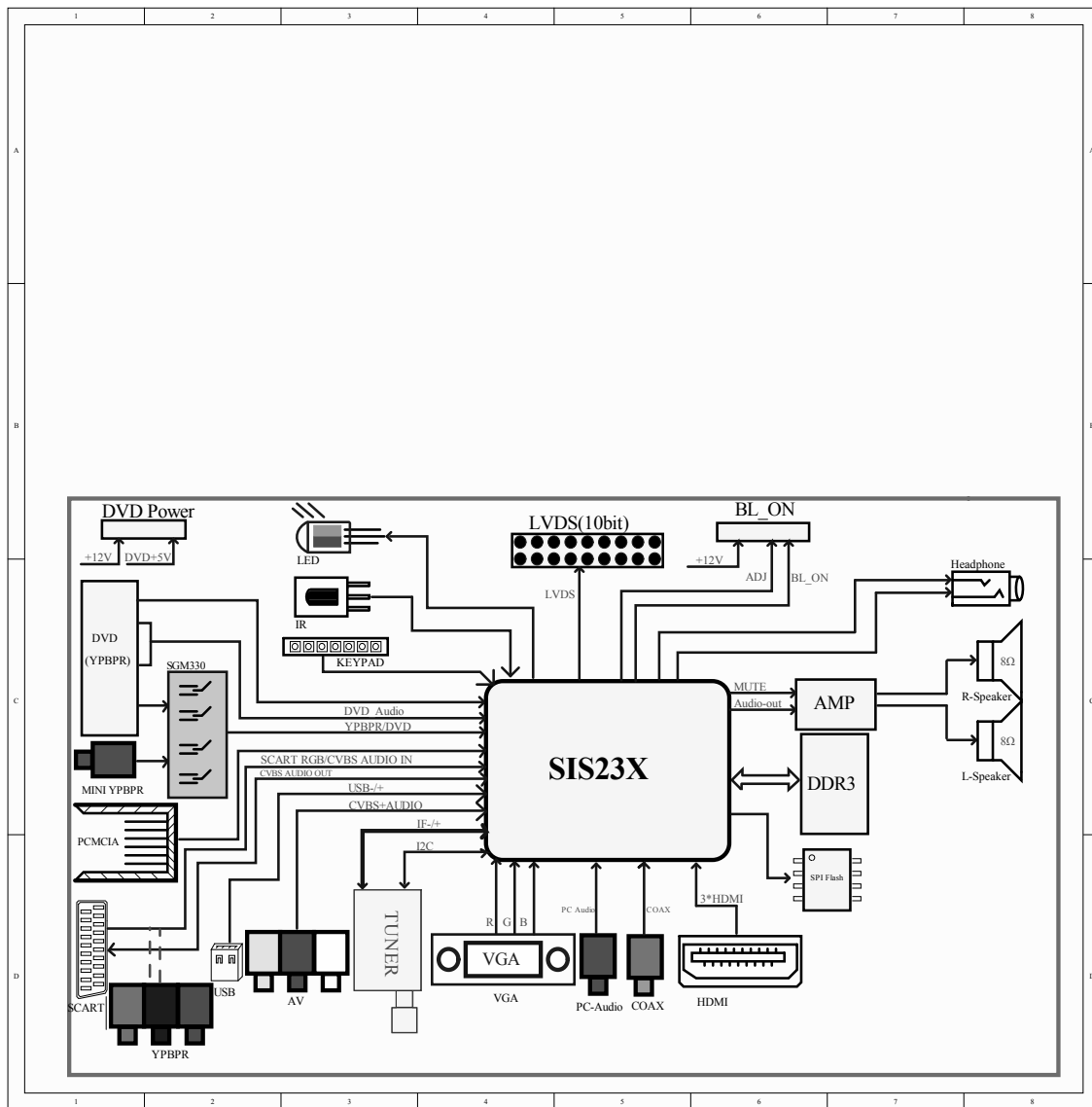
5.3.13. Power board troubleshooting(Block Diagram)



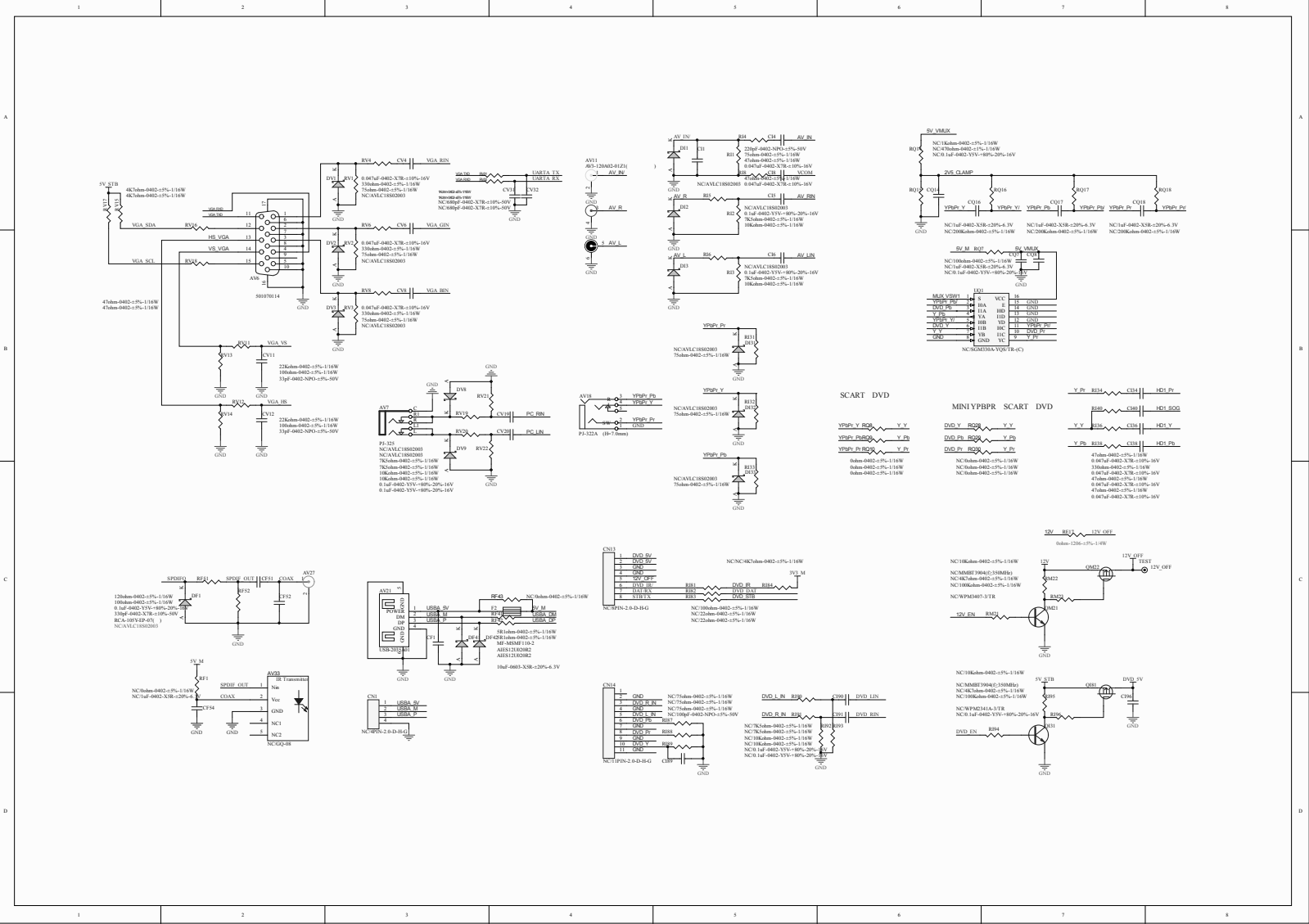
5.3.14. Power board troubleshooting(Non output)

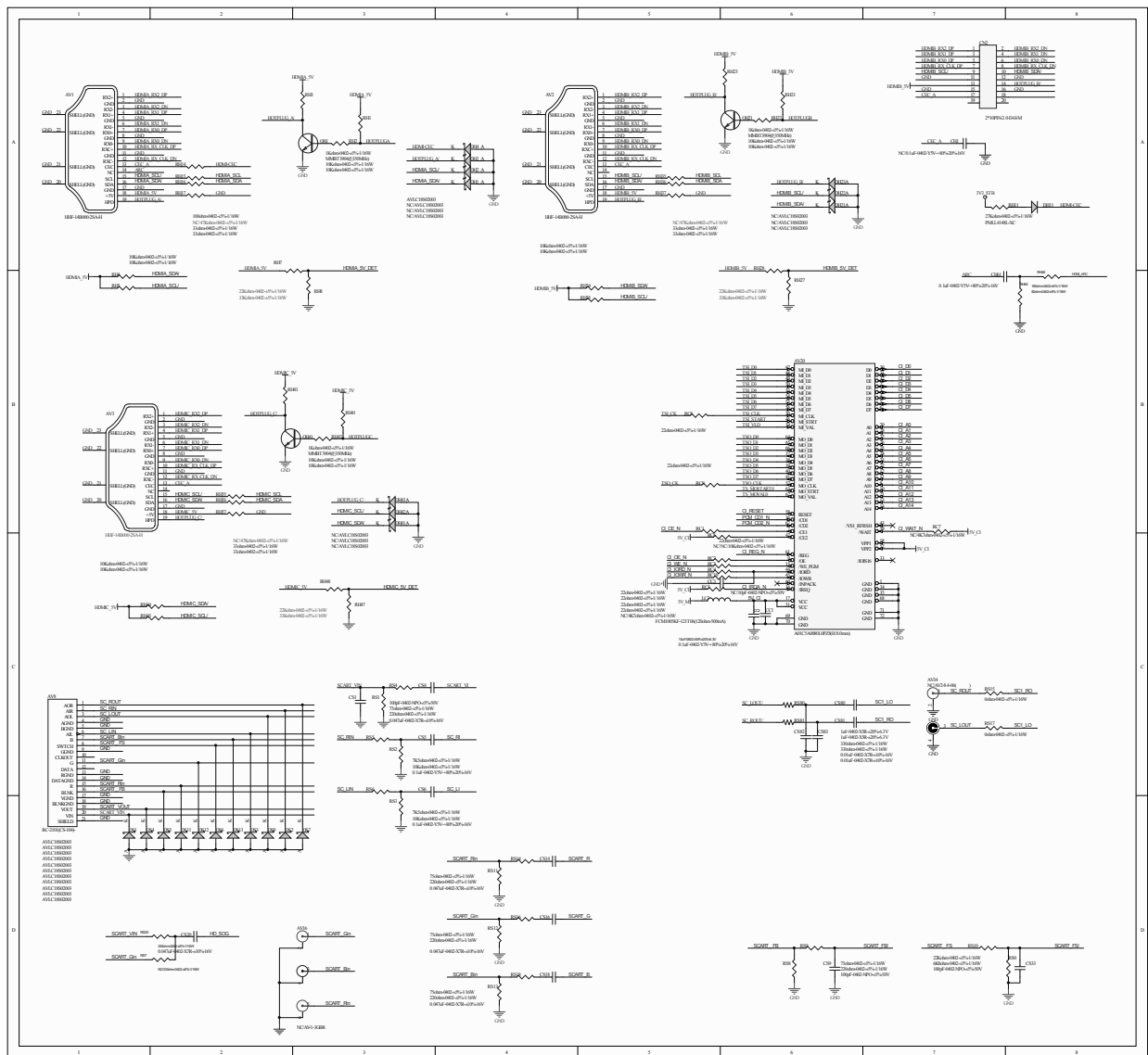


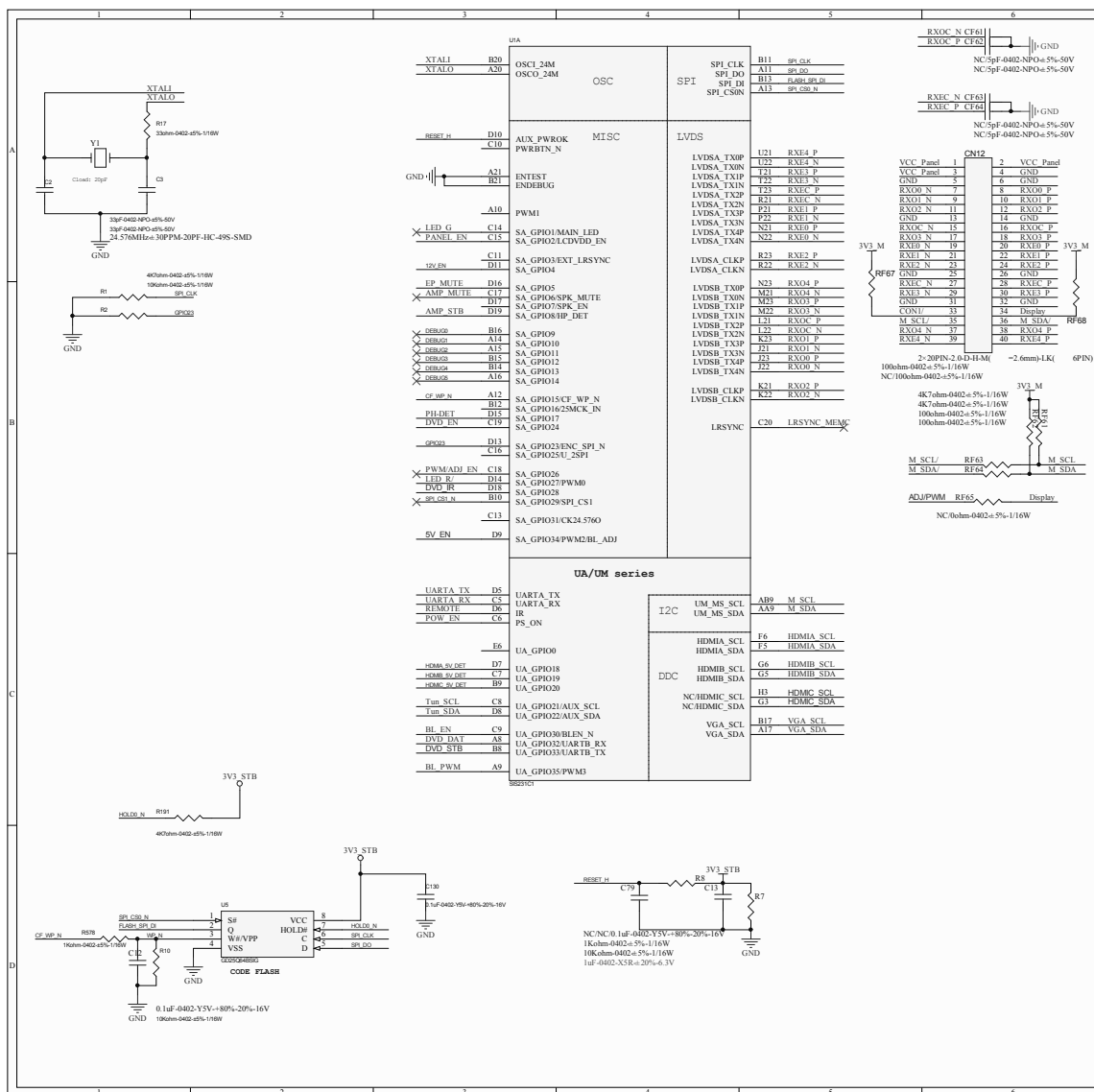




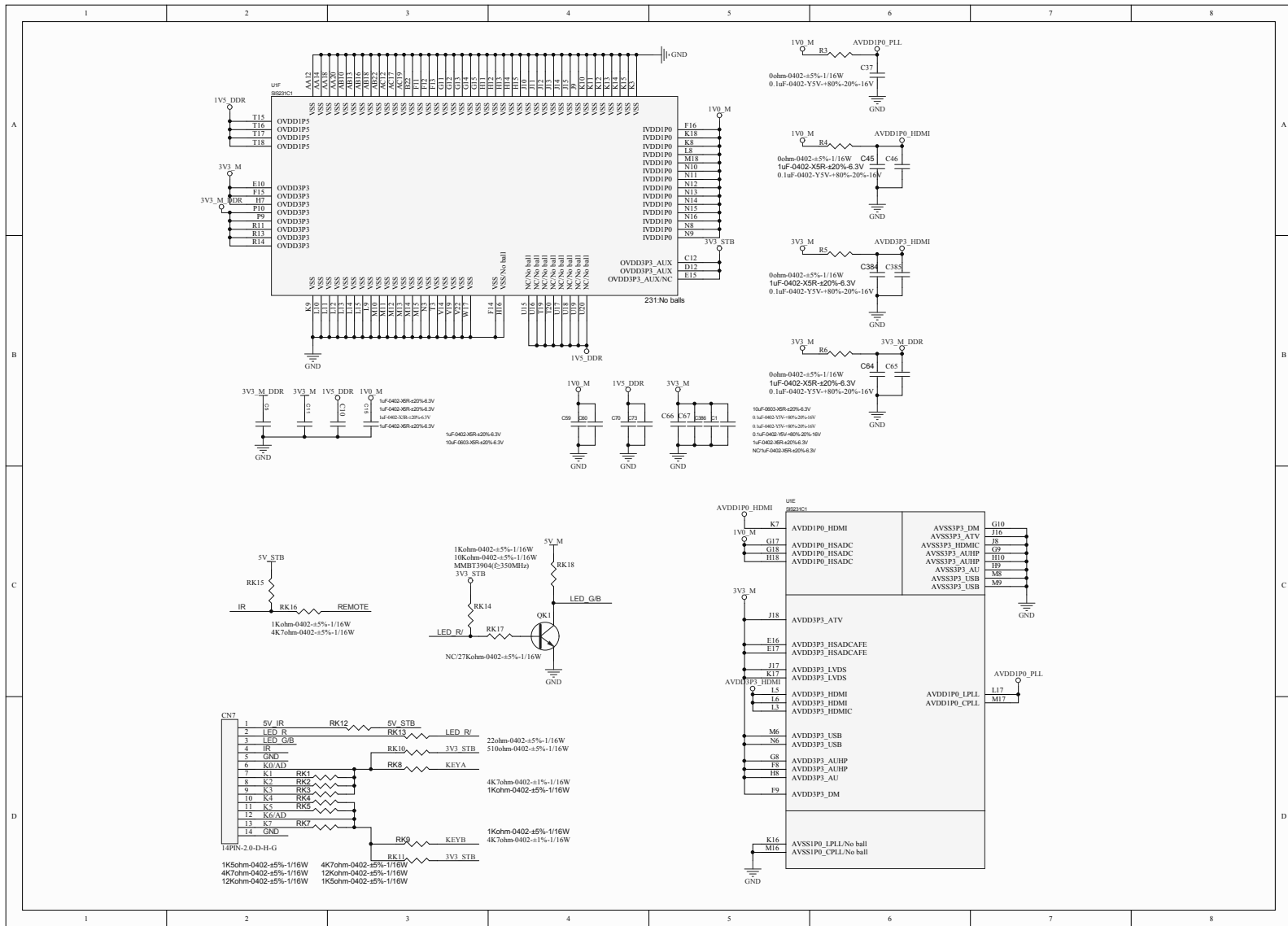




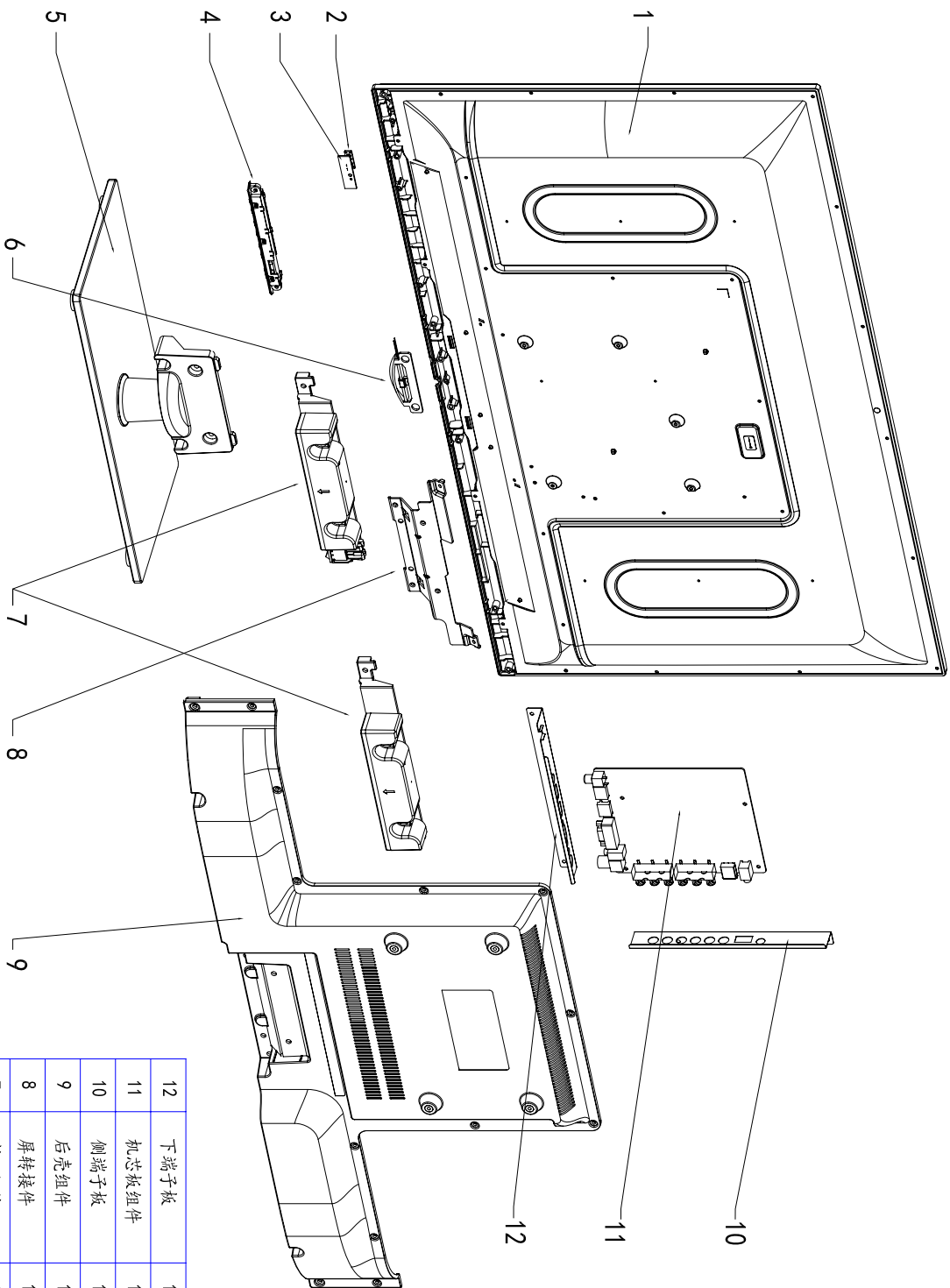












12	下端子板	1	Below Terminal Bracket
11	机芯板组件	1	Mainboard
10	侧端子板	1	Side Terminal Bracket
9	后壳组件	1	Back Cover
8	屏转接件	1	Panel Bracket
7	喇叭组件	1	Speaker
6	装饰件组件 (选配)	1	Decoration Assy. (Optional)
5	底座组件	1	Base Assy.
4	按键组件	1	Key Assy.
3	遥控板组件	1	Remote Board
2	导光柱	1	IR Lens
1	液晶屏	1	Panel
序号	名称	数量	代号